
Description

BACKGROUND OF THE INVENTION

1) Field of the Invention

This invention relates to personal transportation for pulling a user/cargo over a variety of snow-covered surfaces. More particularly the invention relates to expedient and efficient travel over rough or uneven terrain.

2) Prior Art

Other ski systems are known in the art. The best prior art known to Applicant are U.S. Pat. Nos. 4,632,408 and 6,019,380.

The best prior art to Applicant is U.S. Pat. No. 6,019,380 that pertains to a ski for enabling an occupied ski-chair to be operated by a disabled individual while skiing down an incline slope.

- 1) This vehicle consists of a seat arrangement with a spring beneath the seat attached to a snow-ski. Though the vehicle will operate properly in ideal conditions, numerous problems will arise when the user or environment is altered. This is explained as follows:

A) Because the vehicle has one ski and it is operated by an individual balanced upwardly above the ski, it is the user who must always maintain the balance of himself/herself in the Adaptive Mono-ski as the vehicle tips from side to side.

Maintaining this balance could be an impossible task if the vehicle is traversing a cross-sloped surface or if the user does not have sufficient body strength to overcome a vertical shifting from going down a hill.

B) While the object of pulling or towing a vehicle is to provide a means of forward movement, it should also provide the user a measure of comfort. This prior art does not have pulling handles and pushing handles rigidly attached to the Mono-ski to provide balance from attendant skiers. Without poles, the attendants will not comfortably follow the terrain that the attendants and the Adaptive Mono-ski are traveling upon. While negotiating a turn at a quick pace on level ground, gravity and centrifugal forces will cause the vehicle and attendants to become unbalanced in the same vector direction. Thus the Adaptive Mono-ski vehicle will tip in the same direction as the user leans, aggravating the attendants balance.

C) Steering an Adaptive Mono-ski vehicle is difficult because it assumes the user has sufficient strength, balance and control to oppose the forces needed to maneuver the vehicle over rough terrain or uneven surfaces. Since the

BACKGROUND OF THE INVENTION (continued)

steering requires a sufficiently strong and balanced user, it follows that if the user is not strong and coordinated, the user will be unable to move the vehicle smoothly.

D) The above liabilities are proportional to the weight of the user. This becomes an added problem since the endurance of the user is contingent upon the load they need to maneuver.

Another prior art vehicle system is found in U.S. Pat No. 4,632,408 and is designed for independent use by disabled individuals having a frame for supporting the user. The ski is connected to a supporting bar that is mounted beneath the seat. The ski structure is not good for overcoming obstacles because of quick movements necessitated while in use. For travel on narrow trails, this vehicle might be dangerous and uncontrollable at high speeds for the severely disabled. This detracts from the safety and convenience of operation by an individual user.

3) Discussion of Alternative Art

The primary means of accessing out-of-bounds or wilderness locations for skiing, currently available to severely mobility-impaired individuals, is motorized vehicles. That substantially limits the locations that disabled people can legally access and greatly diminishes the recreational wilderness experience. These problems stem largely from the

limitations that conventional ski-chairs and other snow transport devices impose on their users.

The limitations of conventional ski-chairs and other snow transport devices render all remote natural settings completely inaccessible to the disabled where non-motorized vehicles or terrain do not allow. Those limitations create an unfortunate deficit in the lives of disabled people who wish to access snow areas. The current art is specifically designed to remedy problems snow transport devices encounter when being used for conveying the injured, disabled or materials in remote areas. Commercially available manual ski-chairs are unusable and inadequate for withstanding the rigors of cross-country travel. Attempting to travel over uneven terrain in a ski-chair operated by the occupant is a dangerous and frustrating endeavor that often results in the inability to maneuver. Attempts to assist in out-of-bounds rescue extrication may results in serious injury to the user. Another significant impediment confronted by disabled people is narrow trails. That problem is extremely common in remote areas where trails are not wide enough for an unattended transport device to pass. In a rescue operation to extricate an accident victim, using a standard gurney makes it risky for the rescuers. Attempts to bring an occupied gurney up a slope or hiking path can cause much difficulty and the attendants may find the task impossible.

To remedy the above problem, the present invention describes an unobtrusive transport apparatus for injured or disabled individuals. The present invention readily permits

BACKGROUND OF THE INVENTION (continued)

passage of the apparatus through narrow or nonexistent passages. Those aforementioned user controlled ski problems stem largely from the limitations that conventional ski-chairs impose on their users. The front and rear handles of the present invention allow the attendants pulling and pushing the transport apparatus to maintain the balance of the transport apparatus without the transport apparatus bouncing and rocking from side-to-side. The present invention will not tip side-to-side more than the attendants can or will allow.

The invention will be better understood by reference to the following detailed description in connection with the accompanying drawings.